

## DenTASTIC® UNO™ • DUO™

Simplified Dual Cure Dental Adhesive

## DenTASTIC® UNO™

Single Component Light Cure Dental Adhesive

### Procedure for UNO-DUO

1. **UNO + DUO: All Self-Cure and Dual Cure Procedures / Indirect Restorations / Bonding to Composite Core Materials**

### Procedures for UNO Using Light Cure Composites

2. **UNO: Direct Bonding of Composite to Dentin/Enamel**
3. **UNO: Direct Bonding of Composite to Porcelain**
4. **UNO: Direct Bonding of Composite to Metal / Repairing Porcelain Fractured off Metal Framework**
5. **UNO: Bonding New Composite to Old Composite**

### PRODUCT DESCRIPTION

Pulpdent has developed DUO as the dual cure catalyst for DenTASTIC UNO. Use UNO alone for light cure applications, or mix two drops of UNO with one drop of DUO, and the result is a dual cure adhesive for use with all self-cure and dual cure procedures, indirect restorations, and for bonding to composite core materials.

Both DenTASTIC UNO and UNO-DUO contain the patented PMGDM technology and is the result of four decades of fully documented research in dental adhesives.<sup>1,2,3</sup>

1. Patents assigned to the American Dental Association Health Foundation. Bowen RL, U.S. Patent Nos. 4,514,527; 4,521,550; 4,588,756; 4,659,751; 5,270,351; 5,320,886; 5,401,783; 5,789,610. Dickens S, U.S. Patent Nos. 6,001,897; 6,114,408.
2. Bowen RL, Marjenhoff WA. Development of an adhesive bonding system. Operative Dentistry 1992, Supplement 5:75-80.
3. Venz S, Dickens B. Modified surface-active monomers for adhesive bonding to dentin. Journal of Dental Research 1993;72(3):582-586.

### Procedure 1:

#### **UNO + DUO: All Self-Cure and Dual Cure Procedures / Indirect Restorations / Bonding to Composite Core Materials**

MIXING RATIO: **Two** drops UNO : **One** drop DUO

1. Isolate, clean and prepare the tooth for a restoration. Place Pulpdent Cavity Liner or an appropriate liner in the deepest part of the cavity only, if desired.
2. Prepare the mating surface of the restoration for bonding. **For metal** surfaces, micro-etch or lightly abrade with a fine diamond bur, wash and dry. **For porcelain**, etch with Pulpdent Porcelain Etch Gel, dry completely, apply Dry-Rite Drying Agent, and place Pulpdent Silane Bond Enhancer. For cured composite resin, activate the surface with etching gel, wash and dry.
3. Place Etch-Rite, 38% phosphoric acid gel, first on enamel and then on dentin. Etch dentin for 15 seconds. Rinse completely, **but do not dry dentin**. Leave the dentin surface wet. Moisture should be visible on the surface, but should not form a pool. Remove pools of water with a cotton pellet, if necessary. Avoid saliva contamination.
4. **For dual cure capability**, place **two** drops of UNO and **one** drop of DUO, or multiples thereof, in a mixing well.
5. **For direct restorations** with self-cure or dual cure composites, place 2-3 coats of the UNO + DUO combination on the moist dentin and enamel, waiting 5 seconds between coats to allow solvent to evaporate. After the final coat, dry the surface for a few seconds with clean, uncontaminated air. The surface should appear glossy; if not, apply additional coats until glossy surface appears. Light cure UNO-DUO for 10 seconds.
6. **For indirect restorations and for composite core materials**, apply one coat of UNO + DUO to the tooth surface. For indirect restorations, avoid pooling of this adhesive layer. Remove solvent with a gentle stream of air for several seconds. Light cure for 10 seconds. Apply a second layer of UNO-DUO to the tooth surface, and apply to the mating surface of the indirect restoration, if applicable. Remove solvent with air. **Do not cure this layer.**
7. Proceed with cementation of the indirect restoration, or complete the core build up, following instructions for the resin cement or composite core material you are using. Under a restoration, anaerobic self-cure setting time of UNO-DUO is 20-30 seconds. In the presence of air, working time is – 3 minutes.

## Procedure 2:

### UNO: Direct Bonding of Light Cure Composite to Dentin/Enamel

1. Isolate, clean and prepare tooth for a restoration. Place Pulpdent Cavity Liner or an appropriate liner in deepest part of cavity only, if desired.
2. Etch dentin and enamel with Etch-Rite, 38% phosphoric acid gel, for 15 seconds. Rinse completely, but do not dry dentin. Leave the dentin surface wet. Moisture should be visible on the surface, but should not form a pool. Remove pools of water with a cotton pellet, if necessary. Avoid saliva contamination.
3. Place two drops of DenTASTIC UNO™ into a mixing well. Using a fully saturated brush tip each time, apply a first coat to the tooth, gently apply air for 5 – 10 seconds to remove solvent, and then apply a second coat.
4. Remove solvent with a gentle stream of air, but do not thin the adhesive layer. The adhesive will thicken as the solvent dries off. **Maintain a thick layer of adhesive on the dentin surface.**
5. Light cure UNO for only 10 seconds.
6. Place composite and light cure.

## Procedure 3:

### UNO: Direct Bonding of Light Cure Composite to Porcelain / Direct Porcelain Repairs

1. Remove loose porcelain and contour as necessary.
2. Place rubber dam and etch porcelain with Pulpdent Porcelain Etch Gel\* for 2 minutes. Rinse well and dry completely. Keep this surface uncontaminated and dry.
3. Apply Silane\* to etched porcelain surface and dry with clean, moisture-free air.
4. Place two drops of DenTASTIC UNO™ into a mixing well. Using a fully saturated brush tip, apply one generous coat to the porcelain surface. Remove solvent with a gentle stream of air, but **do not thin the adhesive layer. The adhesive will thicken as the solvent dries off.**
5. Light cure UNO for only 10 seconds.
6. Place composite and light cure.

## Procedure 4:

### UNO: Direct Bonding of Light Cure Composite to Metal / Repairing Porcelain Fractured Off Metal Framework

1. Sandblast metal surface or lightly abrade with diamond bur. Tin plate sandblasted surface of high precious alloys for superior results. Rinse and dry.
2. If repair involves bonding to porcelain, remove loose porcelain and contour porcelain edge. Place rubber dam and etch porcelain with Pulpdent Porcelain Etch Gel\* for 2 minutes, rinse well and dry completely. Keep this surface uncontaminated and dry. Apply Silane\* to etched porcelain surface and dry with clean, moisture-free air.
3. Place two drops of DenTASTIC UNO™ into a mixing well. Using a fully saturated brush tip, apply one generous coat of DenTASTIC UNO to metal surface, and to porcelain surface, if applicable. Remove solvent with a gentle stream of air, but do not thin the adhesive layer. The adhesive will thicken as the solvent dries off.
4. Light cure UNO for only 10 seconds.
5. Place composite and light cure.

## Procedure 5:

### UNO: Bonding New Light Cure Composite to Old Composite

1. Lightly abrade the old composite surface with a diamond bur.
2. Etch old composite with Etch-Rite, 38% phosphoric acid gel, for 15 seconds. Wash and dry.
3. Apply one generous coat of DenTASTIC UNO to the old composite surface. Remove solvent with a gentle stream of air, but do not thin the adhesive layer. The adhesive will thicken as the solvent dries off.
4. Light cure for only 10 seconds
5. Place composite and light cure.

\* Porcelain Etch Gel and Silane are available from Pulpdent separately.

**Helpful Hints:** For direct composite restorations, when removing the solvent with a gentle stream of air, do not thin the adhesive resin layer. A thick layer of adhesive gives best results.

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